UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,571	09/22/2003	Shu-Yuen Ron Hui	34590-73504	9662

23643 7590 10/20/2004

BARNES & THORNBURG
11 SOUTH MERIDIAN
INDIANAPOLIS, IN 46204

EXAMINER	
LEE, WILSON	

ART UNIT	PAPER NUMBER
2821	

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/667,571	HUI ET AL.	
	Examiner	Art Unit	
	Wilson Lee	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections – 35 U.S.C. 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9-11, 25-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claims 9 and 10, "provided separately" in claim 9 and "formed integrally" in claim 10 conflict with each other whether the means is a separate module or not.

Regarding Claim 11, line 11, "a said" is not clear.

Regarding Claims 25 and 26, "a separate module" in claim 25 and "a means formed integrally" in claim 26 conflict each other whether the means is a separate module or not.

Regarding Claim 27, "non-dimmable lamp" and "a dimmable lamp" conflict with each other whether it is dimmable or not. Also, "capable of" is vague to the invention whether the limitation is required or not. Further, "the input" lacks antecedent basis.

Claim Rejections – 35 U.S.C. 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-27, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Ranganath (5,747,942).

Regarding Claim 1, Ranganath discloses a dimmable lighting system comprising a fluorescent lamp (30) (See Col. 12, lines 40-49) driven by an electronic ballast comprising a self-excited drive circuit (See Col. 5, lines 57-67), and means (10) for providing a variable DC voltage as an output (128), the variable DC voltage being the input to the ballast (20) (See Figure 1A).

Regarding Claim 2, Ranganath discloses that the means (10) for providing a variable DC voltage comprises an AC-DC power converter connected between an AC mains (AC input 126) and the ballast (20) (See Figure 1A).

Regarding Claim 3, Ranganath discloses that the power converter comprises a step-up/down flyback converter (See Col. 3, lines 11-22, Col. 8, lines 47-52, Col. 14, lines 32-42).

Regarding Claim 4, Ranganath discloses that the power converter comprises a step-down (0-10V variable) forward converter (See Col. 3, lines 11-22, Col. 8, lines 47-52, Col. 11, lines 45-50, Col. 14, lines 32-42).

Regarding Claim 5, Ranganath discloses that the power converter is a power factor corrected AC-DC converter (106) (See Figure 1A).

Regarding Claim 6, Ranganath discloses that the means (10) for providing a variable DC voltage comprises an AC-DC converter connected to an AC mains supply (126), followed by a DC-DC power converter (D5) (See Figure 4A) providing the variable DC voltage as an output to the ballast.

Regarding Claim 7, Ranganath discloses that the AC-DC converter is a power factor corrected converter (106) (See Col. 5, lines 5-17).

Regarding Claim 8, Ranganath discloses that the multiple lamps in parallel (See Figure 4A).

Regarding Claim 9, Ranganath discloses that the means (105) for providing a variable DC voltage is provided separately from the ballast (20) and the lamp (424, 426), and the means (105) for providing a variable DC voltage is provided with connection means (e.g. wires inbetween) enabling the means for providing a variable DC voltage to be connected between an AC mains supply (126) and the lamp (424, 426).

Regarding Claim 10, Ranganath discloses that the means (105) for providing a variable DC voltage is formed integrally with the ballast (20).

Regarding Claim 11, Ranganath discloses an apparatus for enabling dimming control of a nominally non-dimmable lamp comprising, a means (105) for providing a variable DC voltage, the means (105) for providing a variable DC voltage having connection means that enables the means (105) for providing a variable DC voltage to be located between a lamp fitting (100) and the lamp (424, 426) (See Figure 4A).

Regarding Claim 12, Ranganath discloses that the means (10) for providing a variable DC voltage comprises an AC-DC power converter (from AC 126 to DC 128) (See Figure 1A).

Regarding Claim 13, Ranganath discloses that the power converter comprises a step-up/down flyback converter (See Col. 3, lines 11-22, Col. 8, lines 47-52, Col. 14, lines 32-42).

Regarding Claim 14, Ranganath discloses that the power converter comprises a step-down (0-10V variable) forward converter (See Col. 3, lines 11-22, Col. 8, lines 47-52, Col. 11, lines 45-50, Col. 14, lines 32-42).

Regarding Claim 15, Ranganath discloses that the power converter is a power factor corrected AC-DC converter (106) (See Figure 1A).

Regarding Claim 16, Ranganath discloses that the means (10) for providing a variable DC voltage comprises an AC-DC converter connected to an AC mains supply (126), followed by a DC-DC power converter (D5) (See Figure 4A) providing the variable DC voltage as an output to the ballast.

Regarding Claim 17, Ranganath discloses that the AC-DC converter is a power factor corrected converter (106) (See Col. 5, lines 5-17).

Regarding Claim 18, Ranganath discloses a method for providing dimming control of a nominally non-dimmable lamp driven by an electronic ballast comprising a self-excited drive circuit (See Col. 5, lines 57-67) comprising providing a variable DC voltage as an input to the ballast (20).

Regarding Claim 19, Ranganath discloses that the means (10) for providing a variable DC voltage comprises an AC-DC power converter connected between an AC mains (AC input 126) and the ballast (20) (See Figure 1A).

Regarding Claim 20, Ranganath discloses that the power converter comprises a step-up/down flyback converter (See Col. 3, lines 11-22, Col. 8, lines 47-52, Col. 14, lines 32-42).

Regarding Claim 21, Ranganath discloses that the power converter comprises a step-down (0-10V variable) forward converter (See Col. 3, lines 11-22, Col. 8, lines 47-52, Col. 11, lines 45-50, Col. 14, lines 32-42).

Regarding Claim 22, Ranganath discloses that the power converter is a power factor corrected AC-DC converter (106) (See Figure 1A).

Regarding Claim 23, Ranganath discloses that the means (10) for providing a variable DC voltage comprises an AC-DC converter connected to an AC mains supply (126), followed by a DC-DC power converter (D5) (See Figure 4A) providing the variable DC voltage as an output to the ballast.

Regarding Claim 24, Ranganath discloses that the AC-DC converter is a power factor corrected converter (106) (See Col. 5, lines 5-17).

Regarding Claim 25, Ranganath discloses that the variable DC voltage is provided by a separate module (10) that is located between an AC mains supply (126) and the ballast (20).

Regarding Claim 26, Ranganath discloses that the variable DC voltage is provided by a means (10) formed integrally with the ballast (20).

Regarding Claim 27, Ranganath discloses a method comprising connecting to an AC mains supply (126) a module (10) providing a variable DC voltage, and connecting

the lamp to the module whereby the variable DC voltage is provided as an input to the lamp (424, 426).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

MacDonald et al. (5,019,959) discloses a ballast circuit. Skirvin (3,609,452) discloses a lamp driver circuit.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Wilson Lee whose telephone number is (571) 272-1824.

Papers related to Technology Center 2800 applications may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The official fax number is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wilson Lee
Primary Examiner
U.S. Patent & Trademark Office

10/18/04